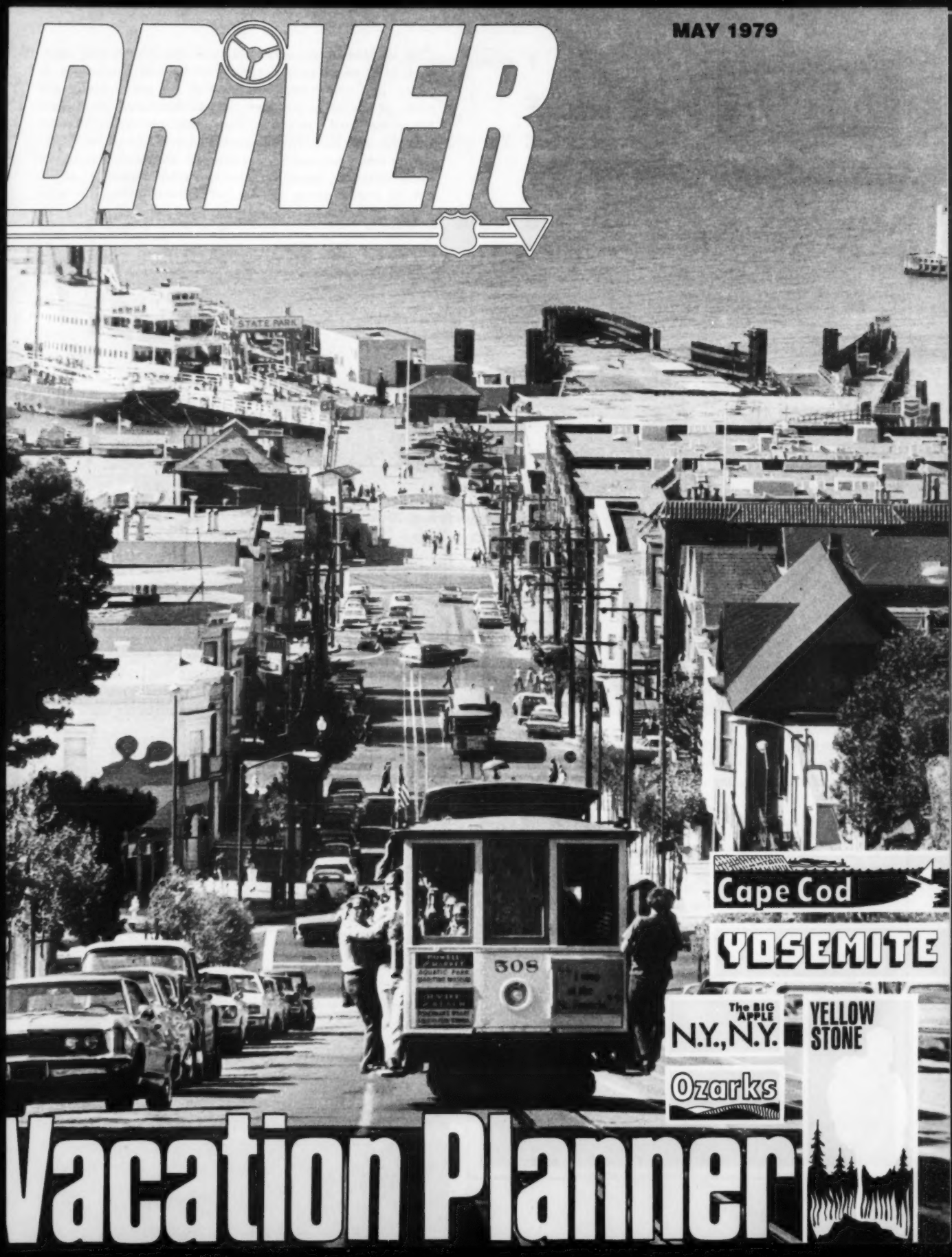
DRIVER

MAY 1979



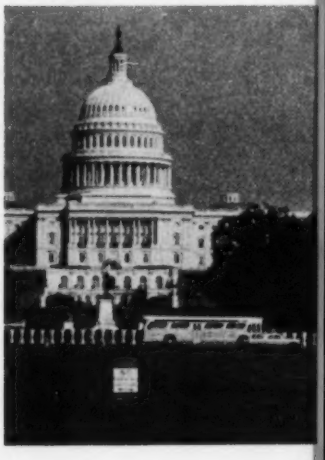
Vacation Planner

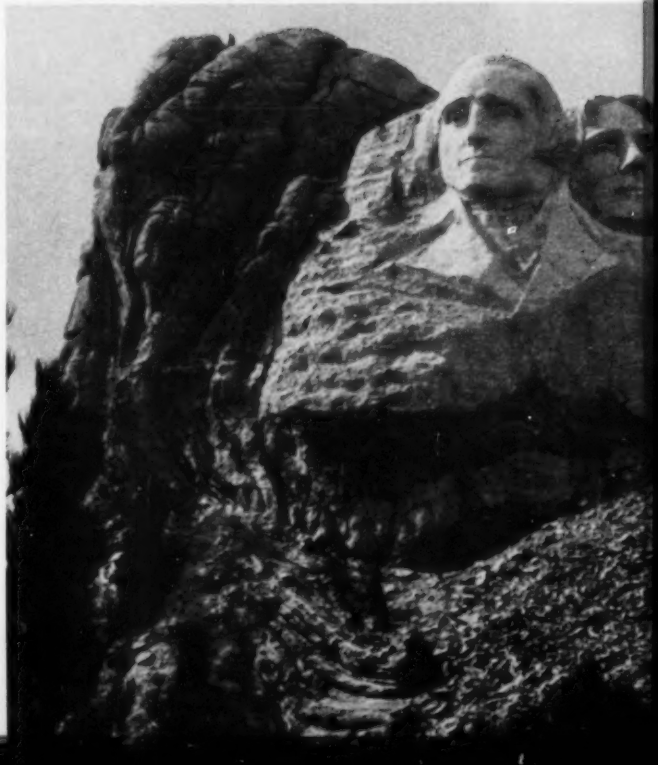
DRiVER

This section is devoted to those of us whose hearts beat faster, and whose eyes mist over, at the mere whispering of the word "vacation."

We've all had vacations during which we had such a good time we wanted the car to break down so we could stay longer. And some of us have had vacations in which the car actually did break down and we wished we could burn it and fly home like a bird. In order to decrease the likelihood of an unpleasant vacation, we've put together a few little items for your use. We've broken them down to help you hunt for the things you have the most interest in. But read 'em all—you may find a few gems where you least expect them.

We'll give you information on preparing your car





for its journey (and what to carry along for on-the-road repairs), saving gas, planning the trip to avoid hassles, keeping kids occupied, and staying awake–with and without others in the car. On your mark . . . get set . . . PLAN!

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Vacation Planner

AUTOPREP

The long days at the office are crawling by ever more slowly as you cross them off the calendar. Only eleven more work days until VACATION. Will it *never* get here?

You think you have more time than you could possibly fill up and all you want to do is get in the car and drive?

(left)
Check out the condition of your brake linings before you go anywhere. Often your life literally depends on your car's brakes.

(right)
Pay close attention to the tread on your tires. You'll be doing a lot of hard driving that will contribute to the wear.

We have a splendid suggestion to help you chew up those last few days before you leave work for a couple of weeks. Prep the car. All those little caretaking items (that you've probably been putting off) can use up all the slack time, and ensure a safer, more enjoyable trip as well. You know how when you're busy you *never* have enough time to do what is needed? Just seems to work that way.

And if you've put off maintaining the car, you *don't* have a lot of time. The earlier you start, the more time you'll have to complete all those chores, and the faster the time will go until vacation. A classic case of bumping off two birds with one stone.

Tires: Start by looking at all four tires on the car. What condition are they in? Tires with cracks, bulges or no tread should be immediately done in and replaced with new ones. Vacation time is no time to be looking for an odd-sized tire in a small town on the desert, and driving with old, defective tires is just *asking* for that headache.

While you're replacing, look at the belts and hoses under the hood. They're inconvenient things to have to replace on the road.

Now is also a good time for a tune-up, lube and change of oil if they are past due. Always remember to change the oil filter at the same time you change the oil. Check out the gas filter and the air filter too; dirty filters will decrease your gas mileage. Tuneups and oil changes are basic to keeping your car running smoothly and cleanly, but it's surprising how many people neglect them.

All systems should be thoroughly checked before you depart. Check the

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DRIVER

THE
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FOR THE MILITARY DRIVER

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MAY

VOLUME 12 NUMBER 12

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THE EDITOR SPEAKS
DOUBLE CLUTCH

IT'S ALL IN THE POINT OF VIEW

Today we read an article that makes us understand why the DRIVER staff always wears seat belts and so many of our readers don't. Seems it's all in the point of view. Some researchers at Decision Research Branch of Perceptionics in Eugene, Oregon, say that "the voluntary use of seat belts depends on motorists believing that their personal likelihood of being in an accident is high enough to make wearing a belt sensible."

In other words, the probability of death or injury on any single auto trip may be too low to make you concerned. Each safe trip the motorist makes reinforces his non-use of belts. The individual driver, overwhelmingly unlikely to have an accident during any one trip, does not see the benefit of belt use.

The DRIVER staff, on the other hand, considers all the motorists in the Armed Forces and the millions of daily trips they make. We know that every day, some of those people are going to need their belts. We read the casualty messages and the monthly statistics and the accident investigations. Our perspective is different.

The Oregon researchers say that we must change the driver's "single trip" viewpoint and get him to consider the risks faced in a lifetime of driving. We're going to do that very thing. As soon as we figure out how.

Changing the oil and tuning up the engine before your trip will ensure a cleaner and better-performing engine.

steering system and the transmission for any leaks. Look at the suspension and replace worn shocks. Carefully check the exhaust system for leaky tailpipes or mufflers – on long drives carbon monoxide poisoning could get you before you know it. Likewise, examine the catalytic converter on the newer cars.

Your electrical system deserves special attention. Replace or recharge a weak battery, and make sure all the power accessories are functioning. Burned out headlights or taillights could get you a ticket, so get those replaced immediately. Aim the headlights properly, with the car loaded and the trailer hitched, if you're pulling one.

Have the air conditioning system serviced so your summer drive will be as comfortable as you can make it.

And pay special attention to the brakes. Worn linings should be replaced *now*. Don't gamble with marginal brakes.

Parts and Tools: Next, for those times you must do repairs on the road, keep the following things in your trunk as you travel: The spare tire and jack, of course, should be there. An assortment of tools should be packed in, including an adjustable wrench, a pair of pliers, a couple of screwdrivers, a roll of medium gauge wire, a roll of electrician's tape and a roll of silver duct tape.

Some replacement parts you should carry are spare bulbs and fuses, fanbelts, and wiper blades. Also, have power steering fluid, transmission fluid, several cans of oil, and some coolant. A few other items are jumper cables, a flashlight and batteries, some flares or reflectors, and a good first aid kit. And mount a fire extinguisher under your dashboard. (See "Wet Blankets," DRIVER January 1978 for details on these.)

Here's a sample of the tools to take along on the trip. They take up some of the space you would otherwise use for luggage, but a wrench is more important than an extra pair of socks.

Yes, this is the same list we've recommended before. And if you remember "In Your Trunk With a Load of Junk" from February's DRIVER, you'll remember all that equipment doesn't take up as much space as it sounds. You may be concerned about the space for your luggage, but we've mentioned overloading elsewhere in this section.

Finally, before you go on that well-deserved (and probably long-overdue) vacation, clean the car inside and out. You'll need the space, and the trip itself will probably dirty the car more than you'd like.

If you do all this preparation, you'll be surprised how fast the days can go between now and the trip. And you'll be able to take off with much more peace of mind.

continued

Go to your local auto club, if you're a member, and let them map out your vacation for you. They can provide you with valuable information on road conditions and accommodations, in addition to the maps.

Or you can map out the route yourself. If you make a definite plan before the trip, you'll know if you have enough time to visit all the spots you want.

If you *do* need a lot of luggage, consider renting a trailer to put it in. Your family needs room in the car.

A travel brochure will provide you with phone numbers of hotels and motels in the areas you'll visit. Call ahead for reservations; otherwise we can almost guarantee all you'll see will be signs reading "NO VACANCY."

Do you really *need* all this? Take only the minimum necessary for your trip.

THE PLAN

We wish we had a crystal ball that could tell us how much gas will be available for motoring vacations this summer. That way we could decide whether to take a vacation by driving across the country, or to bicycle over to the city park for a picnic. The crystal ball could also tell us routes to take for the safest, most enjoyable trip possible. Unfortunately, crystal balls, tarot cards and that kind of stuff never worked too hot for us.

Something that could work much better for you is to make a definite plan for the trip. You could decide where you're going, map it out, set a timetable, and the like. Right now you're probably wondering why we're talking about something so obvious. For two reasons: One is the gasoline, which we've mentioned. The other is the reduced speed on the highways. The first could limit the routes you take. The second will assuredly limit the distance you can go in a given time.

In making your plan you need to know your car's cruising range – the distance you can go on a tank of gasoline. If you can go 250 miles, you should plan around this. Make sure whatever route you take will have plenty of service stations within 250-mile sections. At this writing we don't know what the gas situation will be. Stations could close on Sundays, or all weekends. Some smaller towns may not have the gasoline your car requires, for instance if there's a shortage of unleaded gasoline, which most domestics since 1975 use. If that happens when you're sitting on empty, with the next town 40 miles away, you're in hot water.

And of course, time is another factor to consider in your plan. A few years ago you could get a lot farther in an hour at 70 mph than you can today at 55. So, with a week's vacation, you can't go as far today.

The situation as a whole limits the freedom of travel you may have enjoyed, but it needn't cause you to park the car under a tree and spend your vacation planting a garden if you don't want to. You just need to do a little more planning for the trip.

Reasonable Plans: If you know where you want to go, how far you can get on a tankful, and where you want to be each night, you're halfway there. Just get a map and mark it off: "I start in Phoenix; drive to Albuquerque the first day; make Denver the second . . ." etc. Obviously, that example is too ambitious if you want to do any sightseeing along the way, but you get the idea. Have a definite end point in mind for each day – don't decide "I'll drive until I get tired, and then find a place to stay." Make the drive reasonable. Don't try to drive for 14 hours straight, with stops only for gas and food. If you're tired, you aren't as efficient as when you're fresh.

Likewise, don't expect to get as far if you want to stop and look at anything. The Phoenix-Albuquerque part of the trip in our example is too long a drive if you wanted to stop and look around the Petrified Forest on the way. Keep your plans reasonable. Decide where you want to be each night, but remember that surprises can happen at any time and can delay you. If you allow yourself extra time to get to any destination, you'll be better off.

As a more or less arbitrary rule, don't be on the road any longer than 10 hours, including stops for gas and meals, in any one day. Of course, there are exceptions. If you have someone else there to take turns driving, you can go longer. But remember that even riding in a car is tiring; your friend will get almost as tired when he isn't driving as he will at the wheel. If he can sleep in the car, that could help.

Advance warning: All things considered, it'll be good to have some idea in advance of what to expect on the road, and an auto club can help here. There are private auto clubs like the American Automobile Association, as well as those allied with stores like Montgomery Ward, and some insurance companies. If you're a member, you can ask them to map out a route that will allow you sufficient time to see what you want, a route that won't require excessive driving each day, and especially a route that will have enough service stations to supply the gasoline to operate the car. They also have travel brochures that will list interesting points to visit on the way.

Another possible source of useful information is the state highway patrol. Either way, it's nice to have some idea there'll be good roads and gasoline, so you won't get stranded in Otterpelt, New Mexico. While we're on this, it's a good idea to have the phone numbers of the auto club offices in the areas you're to visit, just in case. Emergencies don't happen on a schedule – that's what makes them "emergencies."

To ensure a pleasant trip, you may want to call the weather service each morning before you start out. They can give you advance warning of any storms.

Reservations? How many times has this happened to you: You've been driving for ten hours, you're dead tired and all you can think about is lying down. You left the last town 50 miles back. The town you're in has no vacancies in *any* motel. The next town is 50 miles farther on. Do you drive back (or to the next town) and *hope* there's

continued

a vacancy and also hope you don't fall asleep at the wheel? Or do you find a campground and try to sleep in the back seat?

You can plan around this one, too. Simply call ahead for reservations. Again, your auto club can help, with a list of motels in the town you're going to. Some of the larger chain motels will even reserve them for you, often for no charge.

Reserving is much better than trusting to chance that there'll be room for you in the inn, even if you have to call long distance to make the reservations.

Once you've got this plan made for your trip, you can leave a list with friends or family in case they need to contact you. If, for instance, your parents knew you'd be at the Howard Johnson's in St. Louis on Friday night, they could easily call to give you an important message. So it's a good idea to leave a copy of your "itinerary" with someone.

Packing up: What you take depends on where you're going, but there are some items you'll need no matter what your destination. Your license, registration, proof of insurance and leave papers are all documents you should have. Also make sure you have enough money to cover expected (and surprise) expenses. Your checkbook, credit cards and traveller's checks are better to carry than wads of cash.

As you're getting ready to go, remember that new cars today are smaller and they provide less room. Don't overload the car – your passengers will need some room to shift around, unhampered by luggage, ice chests and coats. Overloading happens when you take along too much. Travellers often do this – they think that if they'll be gone two weeks, they'll need twice as much as they would for one week.

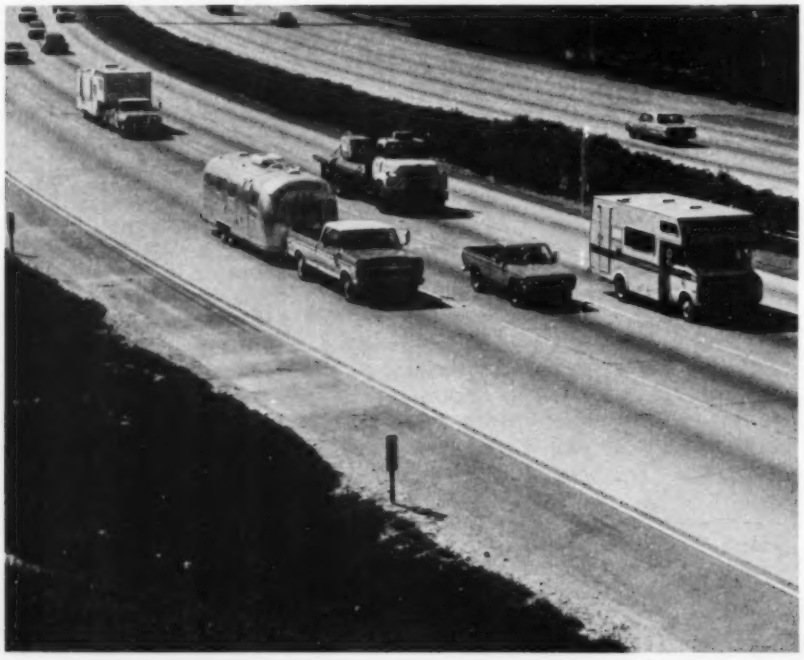
Be stingy about space and take along only the minimum of clothing that you can. You can easily wash some clothes at a laundromat on the trip, or even at the motel (most have washers). Save the space for people and for emergency supplies for the car. The less you carry, the better your gas mileage will be.

For what you do take along, distribute it evenly – luggage and passengers. Don't put all the heavy people in the back seat, especially if the trunk is well-loaded. Keep things out of your way. Don't let anything block the driver's vision. And don't put things on the rear window ledge. They could fly off in a panic stop.

Whatever kind of vehicle you drive, make sure each passenger has a seat with a safety belt. That means no children standing on seats; no passengers in the overcab section in a camper; no passengers riding in travel trailers. In an accident any people not in seats with belts might be seriously injured.

When you've made plans to handle all the problems you can foresee, you're ready to go. But read on; we've got some more information for you . . .

While you pack, make a list of all the various documents you must have with you. Let's see . . . license, registration, checks. . . .



Whether you're going for four days or a month, whether you're going in a subcompact or hauling a 30-foot trailer, you need to plan in advance for the trip.

Will You Shut Up ?!?

What is the greatest safety hazard on the open highway? Well, discounting stray deer, which usually have enough sense to stay out of the roadway, and mechanical difficulties, which you've hopefully forestalled, what's left?

Answer: Those vacation auto accessories many drivers can't leave behind – the children. The average auto will come equipped with two or more, and they present more danger to the driver than any other single thing.

Their danger-producing ability is their tendency to distract the driver from what he should be doing. Children are not quiet, and they do not like to sit in one place for long periods of time. They shout, they fight with each other, they fidget and squirm, they try to focus your attention on junk lying by the road, and so on and on . . .

Therefore, one of the most effective safety considerations is to keep the little ones occupied and reasonably happy.

This will be a harder task than it was years ago. You've probably noticed that already, because the 55 mile-per-hour speed limit increases driving times, and therefore increases the boredom of children. Children like to run and play, not sit and ride in a car.

Children do not get off on scenery. Say, "Look at the pretty mountains, Marie," and she'll say "I want a candy bar. When are we gonna stop?" Say, "See the waterfall, Johnny?" and he'll say, "I gotta go to the bathroom! When are we gonna stop?"

You probably don't think about them, because you're busy – you have traffic to watch, your hands and feet are controlling the car, you're watching for road signs to make sure you're going the right way.

But what about Marie and little Johnny in the back seat? They aren't busy. They sit for hours while you drive on and on. When they can't move, or go chase that rabbit they just saw (or get their candy bars) they get angry and they pick fights with their brothers and sisters. And that's distracting to *you*.

On the other hand, happy, well-behaved children are fun, and they'll be that way if you give them something to do. The trick is to give them something to do that'll keep them moderately quiet, something that won't require a lot of movement.

Coloring, reading & singing: How about coloring books? Kids like 'em and they're quiet while they're coloring. If you want to do that, make sure they're neat, that they don't leave the crayons lying around. A forgotten crayon left in a hot car will melt right into the carpet, and the wax is difficult to remove.

Letting them draw with a pencil and paper is not a good idea. If you made a sudden turn for some reason, they might poke themselves in the hand or the face with the pencil. Anything involving scissors should be avoided for this same reason.

Reading is another quiet activity, if your children like to do it. They're learning something valuable, and they're not annoying you in the bargain.

Another thing that might work is to give them a task to accomplish that requires them to watch the road. Have them look for the exit sign

When children have to sit for a long time they get fidgety. Then they'll either poke one another, argue, or launch into a full-scale brawl.

Isn't this a lot better? All three belted in, engaged in quiet activities that don't distract the driver—you—from your task.

Here's the key to well-behaved youngsters on a long auto trip. Stop every couple of hours and let them run around. They'll get it out of their system for a little while, and they'll be content to sit for a couple more hours. The stop will be good for you, too.

continued

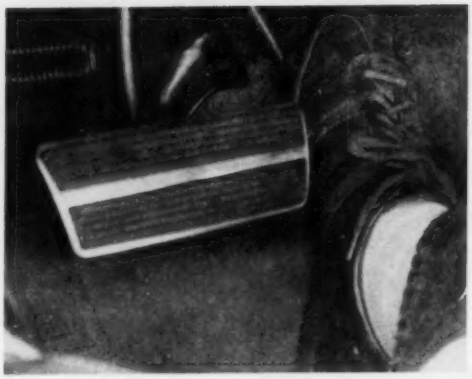
you want. Have them look for the word "forest" on a road sign. (A little rewarding is okay here: "First one to spot a raccoon gets to choose where we eat." That's much better than threats: "The next one who opens his mouth gets his nose broken!") Or have them look for as many different out-of-state license plates as they can find on passing cars. (That could keep them occupied for hours, especially if you're in Arizona and they're looking for Vermont plates.)

If they want to say something, let them talk to you. After all, it's bad enough for them to sit still for hours without having to be quiet, too.

You could take advantage of it. Play word games with them like "20 Questions" or "Who Am I?" or any others you can think of. Or let them sing, a pastime most of them like. Anything that's not too loud, and is not violent, could be permitted.

Now that we've told you all these things you can do to keep your children quiet, we'll tell you that they are probably right. They want you to stop so they can get something to eat, and you should listen to them. About every couple of hours.

Sometimes they might be smarter than you are. Stop about every two hours, get out and stretch, let someone else take the wheel, and then go again. Your children will be happier for the break from the car and you might be surprised that you are happier and more comfortable too. Those little safety hazards we call children can also be valuable judges for when it's time to stop.



A heavy foot will not only earn you more speeding violations, it will also blow a lot of your gasoline out the tailpipe. Traveling too fast, and quick accelerations, will rob you of many miles per gallon.

MMPG (More Miles per Gallon)

This summer we may be lucky to have any gasoline at all to use on a vacation trip. Talk of shortages and weekend closings of service stations have become the most common subjects for morning coffee breaks. What gasoline we have is sure to be much more expensive than it was last year this time. So it's more important than ever to consider the ways to conserve fuel. During your vacation you'll use far more gasoline than average in a short time, so you'll want to keep your consumption to the bare minimum.

Several driving techniques will go a long way toward this end, and they are very easy to do. One is simply to drive slower. That particular method is greatly aided by the national speed limit of 55 miles per hour. Your car will get its greatest fuel economy at 35 miles per hour. Aside from the fact that it's illegal to drive *that* slow on the highway, it would also make for an ex-

Remember this sign? This is as fast as you can go—legally—anywhere in the United States. And your gas tank will empty at a slower rate at 55 than at 70.

It looks like this on that number-gauge-thing on your dashboard.

Keep the proper inflation in your tires at all times. They wear better that way, and they offer less rolling resistance, which increases your gas mileage.

tremely long trip. However, a constant speed of 50 miles per hour will gain you about 5 miles per gallon over driving at 70 (and 70 will gain you a ticket from the "smokies").

Note the word "constant" above. That's another technique that'll save you a lot. Hold your speed as steady as you can manage. Frequent changes of speed will rob you of many miles per gallon. A "cruise control" is great, if your car has one.

Twinkle toes: Rapid accelerations are also real gas-wasters. This is the "lead foot" syndrome. Keep a light foot on the pedals—no fast accelerations or decelerations. Gradually accelerate up to 55 and hold it there. Be very watchful for hazards that will require evasive action and slow *gradually* (when possible). When leaving the highway, plan ahead for the exit and ease off the gas pedal; don't jam on the brakes.

In fact, do all your maneuvering slowly—accelerations, slowing, lane changes and the like need not be done fast except in emergency situations.

One good way to maximize mileage is to minimize use of the car's air conditioning system. This doesn't mean you have to drive in discomfort, though. If you start the journey early each day, you'll be driving when the outside air is cooler. Also, the car itself will run cooler, which will add to the savings. (Early starts also eliminate driving at night, when you're tired. See "Stayin' Alert" for more on that subject.)

Also you can avoid unnecessary stops, which waste gas mileage. By "unnecessary" we don't mean those stops to get out and stretch that we've mentioned elsewhere in this section. We don't consider those unnecessary—they are vital to maintain your alertness and thereby your safety.

Now to some more purely mechanical aids to gas mileage. As we have mentioned in the preparations article, a tuneup is a good investment in mileage. Also, have the carburetor adjusted, and change the air filter at the time of the tuneup.

Air up: You readers have probably noticed our crusade to get you to keep proper inflation in your tires. Underinflated tires could take about 1 mpg off your mileage—not a lot in itself, but these little amounts add up to remove money from your wallet.

And while we're on tires, we'll mention radials. Radials can add about 2 miles per gallon to your fuel economy, besides their advantage of longer wear. Keep radials in mind when you need new tires.

One final reminder on saving gas—don't overload the car. The more weight your car carries, the more power it will require to pull the weight.

These suggestions should help you put a few extra miles on each tankful. It's much nicer to *talk* about a shortage of gasoline than to *experience* it on the road.

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Coffee is the only thing that's more expensive than gasoline, but it does a neat job of helping to keep you alert. You should stop every few hours for a cup, or just some food. Just stop and get out. Get it?

Otherwise, (right), you'll do the Rip Van Winkle imitation. Just because you're "only" sitting don't think driving won't tire you out—it will.

(below)
Cars that are equipped with adjustable seat backs allow you to vary your position and fight driving fatigue.

STAYIN' ALERT

There's a great difference between being *awake* and being *alert*. "Awake" could be defined as "conscious," while "alert" is more properly "watchful." Being alert is always important in around-town driving, where many things catch your eye to keep you watchful. But what about long distance drives? Cross-country motoring with long, straight stretches of road can have a lulling effect on you, if you aren't careful.

Like if you get too comfortable. It's an odd thing about comfort – you drive better if you're comfortable, but when you become *too* comfortable your driving performance suffers.

You need a comfortable seat-back position to avoid pains in your back on a long trip. You need heat in the car to keep your feet from freezing (or in summer you need coolness to keep the outside heat from melting you into a puddle on the floor). But on the other hand, if you're too comfortable, you could fall victim to "highway hypnosis" or the sandman.

Autopilot: Consider this: We'll say your car has a cruising range of 300 miles on a tankful of gas. At 55 miles per hour you could go about five and a half hours behind the wheel without stopping. And after a certain length of time, you'll go into a condition commonly called "highway hypnosis." This is a mental condition in which the monotony of the driving causes the higher centers of the brain to concentrate on other matters and you drive more on reflexes and habit patterns. It's like driving on automatic pilot.

Any kind of driving monotony can lead to the condition of "highway hypnosis."

It happens to all of us to some degree at various times. You'll be driving the familiar route home from work and your thinking part in the brain is making a mental shopping list. You make a turn at a stoplight and are only dimly aware of having done it. This same condition of "highway hypnosis" can cause you to miss a well-marked exit on a freeway. It's a very dangerous condition to be in when an emergency crops up.

That's what we mean by "awake but not alert."

Switch seats: If the highway on your long vacation trip doesn't provide enough mental stimulation to keep you alert, you have to find other methods to break the monotony.

If you're travelling with others, like friends, or your spouse and kids, you'll

continued

When you make one of your occasional stops you can use the opportunity to check your location on a map, or to change drivers.

Hear the snap of the vertebrae in your neck. Feel the tension leave your shoulders and lower back. Feel the circulation revitalize your body and your brain. Now aren't you glad you stopped?

find the task much easier. Most obviously, someone else can share the driving. Every two hours or so the wife can take over and allow the husband to relax in the co-pilot's seat or even take a nap.

But the presence of others can help in other ways. They can keep you alert with conversation. Word games, such as those we've mentioned in the article on kids, can keep the wheels turning in your cranium without diverting your visual attention from the road. Even simple discussions can help – as long as they're not *too* engrossing. A heated argument about pass interference at the Super Bowl is never a good idea in the car.

Get out: One of the most important things to remember while you're travelling is to take time every so often, like at two-hour intervals for instance, to stop and get out of the car. Your body gets tired and cramped sitting in one position and this discomfort will reduce your driving efficiency. You might just pull off the road to get out and stretch your arms and legs, or you might stop at a diner and get a sandwich and a cup of coffee. The important part is to stop. (By the way: When you eat, don't overstuff yourself. That'll make you drowsy.)

Getting out of the car only when you have to stop for gas really isn't sufficient. With that cruising range we mentioned of 200 to 300 miles, you could go for four, five, and even six hours without a break.

Going solo: Driving by yourself presents some problems that are more difficult, but can be handled. Your brain thrives on variety, but if there's no one else there to vary things, you have to find another way. Driving alone makes it even more important that you stop once in a while to sweep the cobwebs out of your head.

The "highway hypnosis" we mentioned before is more likely to hit the solo driver. A zombie-like creature catatonically gripping the wheel is bad enough. But the solo driver is also more likely to take an unplanned snooze. When you drive with nobody for company you have to avoid these things all by yourself.

We don't like any stronger drugs than the caffeine in coffee to keep awake (and even that isn't good for some people). So besides keeping your eyes constantly moving and reading every sign, we'll suggest a game. We call it the two-second game, based on the two-second rule. You play it when you're following someone on the road. When they pass a stationary object, like a tree or a sign, you count "one-thousand-and one, one-thousand-and-two." You should not pass that same stationary object until you have finished counting. If you pass it while you're still counting, slow down a little and start again. The act of staying just at the two-second distance will keep your attention on your driving, and it will also give you enough room to stop if the fellow ahead does.

Your car radio can help keep you alert also, with music or news programs. Something with a little variety is better than the same thing for mile after mile. Those call-in talk shows might be good, if you don't get too involved in what's being discussed and distract yourself from the main task, driving. As for music, you might find that certain kinds of tunes act as a lullaby. You should avoid those stations.

We hope these suggestions will help you on your trip, be it a family vacation or a trip alone. But we want to make sure. Your eyes are getting heavy . . . you are going into a deep sleep . . . you will stop driving every two hours for some coffee or just to get out and stretch . . . you will be alert at all times . . . you will have a safe and enjoyable trip. . . .

Timely Topics

NEW PASSENGER CAR TIRE GAUGE DEVELOPED FOR SAFETY GROUP

A new tire pressure gauge which measures up to 80 pounds per square inch (psi) has been developed for auto owners, the Tire Industry Safety Council announced this week.

"The need for new type of gauge came about because of the recent move to higher inflation tires, including temporary spares which require an inflation pressure of 60 psi," said Council Chairman Malcolm R. Lovell, Jr. "The new gauge also measures the air pressure of conventional passenger car tires."

For years most auto tire pressure gauges have been calibrated to 50 psi, while the maximum pressure for most auto tires was 32 psi. Recently new tire pressures have been moving upward to save gas and make tires last longer.

"Every driver should have a personal tire gauge because proper inflation is the most important requirement for maximum tire safety and mileage. It should be used at least monthly (more often in winter) and before long trips to ensure the safety and mileage you paid for," Lovell said.

"A particular problem is finding an accurate air tower at service stations to determine the actual pressure recommended for your tires," he said.

Lovell said government tests have found that approximately one out of three air tower gauges is wrong by four pounds (psi) or more, and three out of five are wrong by two pounds or more. Underinflation by 4 pounds can reduce treadwear by as much as 10 percent, he noted.

A survey by the National Bureau of Standards found that more than one out of four cars has at least one seriously underinflated tire. Other studies indicate an even higher number.

Properly inflated tires can add up to five percent to gasoline mileage, or an extra mile per gallon, according to industry experts. "This means for the average motorist who uses 1,000 gallons per year a savings of at least 50 gallons of gas," Lovell said.

Recommended tire pressures can be found in your vehicle owner's manual or on a sticker affixed to a doorpost or glove compartment door of your car.

The new pencil-type gauge was developed for the Council by the Air Control Division of Eaton Corporation, which makes Dill gauges. Made of durable plastic and metal, it is lightweight (1 oz.) and can easily be carried in your pocket, purse or glove compartment of your car.

The 80-psi gauge is nearly 6½ inches in length and is 3/8ths of an inch in diameter. The calibrated plunger is easy to read and preliminary tests show it to be accurate within one pound per square inch, plus or minus.

If you want to obtain the 80-psi gauge, see your tire dealer. If he doesn't have it yet, you can get one by mail, Lovell said. Send a check or money order for $1.75 to Gauge, Tire Industry Safety Council, Box 1801, Washington, D.C. 20013. (D.C. residents add 5% sales tax for a total of $1.84.) The price is "at-cost"; the Tire Industry Safety Council does not make a profit on this item.

FROM USAF SAFETY OFFICERS STUDY KIT

SMSgt Hancock/SET
Directorate of Aerospace Safety

In October of 1978, a student at Aberdeen Proving Ground, MD, using an oxygen/acetylene torch was practicing torch cutting on an automobile bumper. The bumper was an energy absorbing bumper with a shock absorber in each end. The student operator of the torch cut a small hole in the shock absorber, causing the hydraulic fluid in the shock to spray out and be immediately ignited by the torch. The student received burns to his face, head, neck, and ears.

STUDY FINDS HEAVIER CARS LIMIT INJURIES

Drivers of light cars run twice the risk of being killed or injured in a crash as those behind the wheel of heavier vehicles, according to an analysis of more than 600,000 accident reports filed by police in North Carolina from 1973 through 1975.

The study done for the National Highway Traffic Safety Administration at the University of North Carolina determined that about 25 per cent of the drivers of the smallest cars "receive injuries in crashes, while 14 per cent of the drivers in the heaviest-weight cars receive injuries."

The study notes that what happens in a crash is dependent upon several factors. The rate of speed, the angle at which the vehicle strikes an object and whether the driver was wearing a safety belt all are involved.

But this study and others have found that the weight and size of vehicles play an important role in the severity of vehicle-to-vehicle crashes. The researchers emphasized importance of "distinguishing between vehicle size and vehicle weight" as factors in crashes because "weight is essentially a 'hostile' property and size a 'protective' property in crashes."

With automakers cutting weight as one method of helping meet federal fuel economy standards, the march toward lighter cars and more deaths and injuries is likely to continue.

The North Carolina study showed that even in crashes between vehicles of the same weight, light car drivers (hitting another light car) were twice as likely to be killed or injured as drivers of heavier cars (hitting another heavy car). In addition, the study found:

- Crashes in rural areas tended to be much more severe than those in urban locations. Higher crash speeds were cited as the reason.
- The percentage of drivers wearing safety belts who were killed or seriously hurt in two-car and single-vehicle crashes was "less than half that for unbelted drivers" in each of six weight ranges.
- Although death and injury rates were higher in single-vehicle accidents —a finding attributed to greater crash speeds—"no trend" in single vehicle crashes that could be linked to vehicle weight was seen.

LIGHTNING WARNING

As if motorcyclists don't have enough safety-related problems already, the Consumer Information Center warns bikers that their metal steeds draw lightning. Of course, cyclists aren't the only ones that are susceptible to lightning . . . bicycles, tractors, and fences attract the stuff, too. And if you want to know what a lightning strike can do to you (if you survive), just ask golfer Lee Trevino. He was hit by a bolt of lightning while on the golf course, and it took him over a year to regain enough muscle use and coordination to be competitive on the golf circuit.

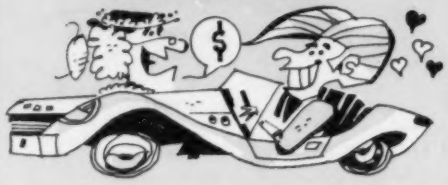
The Consumer Information Center warns that if you are outside when a thunderstorm strikes, get into a house or car as quickly as possible. If you're in or near water, get well away from it. If you are in a forest, seek shelter in a low area under a thick growth of small trees or bushes. In the open, get to a low place like a ravine or valley, but watch out for flash flooding. If you're out in the open with a group, spread out.

If someone near you is struck by lightning, give CPR if necessary, and get medical help as soon as possible.

Little old lady from PASADENA

Looks good, does it? But you're still shopping? Advance to dealer's lot.

GAMBLE



A mint-condition 1937 Hupmocord for $49.95? Elephants can fly too, Bunky.

DEALER'S LOT

Nothing here? Go back two spaces. Do not pass GO. Do not stop at the credit union for more money than you've already budgeted.

ORIGINAL OWNER

Advance one more space . . . fast!

WHO'S SELLING?

See something you like? Advance one space.

len

A game you can win if you know the rules

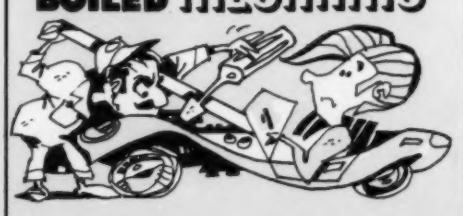
When we buy a used car, it's usually because we don't want to—or can't—spend the money a new one would cost. But buying a used car is also an important conservation measure. The energy used to manufacture a new car is equivalent to about 10,000 miles of driving. If you buy a used car, this energy use is avoided.

A used car also does not depreciate as quickly as a new car. As soon as you drive a new car off the lot it has depreciated at least 10%, and often 25% or more. If for some reason you must sell that new car shortly after buying it, expect a significant loss. But your used car's value generally remains fairly constant for quite some time after its purchase so long as you keep it in reliable condition.

CREAM PUFF

Enjoy.

HARD BOILED MECHANIC



Pay a pro to check it out. Then advance one space or go back 14 spaces.

WALKAROUNDIT

Slam the doors. Kick the tires. Did they fall off? No? Advance 2 spaces.

GAMBLE

You love that Hupmocord, don't you Bunky? Why not advance to THINK IT OVER and think it over?

WALKAROUNDIT

Start the engine. Let out the clutch. Does it move? Advance one space.

AID

How do you buy a used car? If you are not a "backyard mechanic," can you recognize a lemon for what it is? You can. Think the transaction through in advance.

First, decide what you want and can afford, and stick to it. When it comes to options such as power steering and air conditioning, don't take for granted that you must have them. They will increase your gas consumption.

Second, consider getting your car through the newspapers' want ads. While used cars purchased from the owner have to be investigated as thoroughly as those purchased from a dealership, you can get good buys that way—and you save shopping time and gas.

You often hear that when you are buying a used car you are buying someone else's problems. When you are buying from the original owner, you can ask him why he is selling. He just might tell you the truth.

The classified section of your newspaper has another advantage: By checking the listings of individuals and dealers, you can determine the age and make of cars you can afford. Note that "clean" cars bring more money when you are buying. They are worth the price.

Make use of other outlets as well. Check auctions, sales lots belonging to the big car rental agencies, and the new-car trade-ins on dealers' lots. Dealers will probably offer some type of guarantee, but then prices probably will be higher, too. If you are offered a warranty, look at it critically. Some

continued

LA DRIVE EAST

EUREKA!

No funny noises? Advance to LA DRIVE SOUTH.

LA DRIVE WEST

WOW!

Advance two spaces.

LA DRIVE SOUTH

S'ALRIGHT!

Go back three spaces.

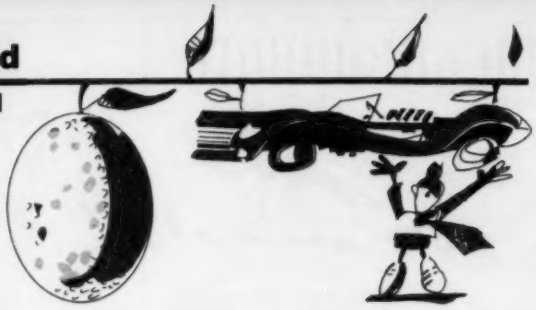
LA DRIVE NORTH

NEATO!

You can either go back one space or advance two spaces.

THINK IT OVER

- Monthly Payments
- Insurance Premiums
- Maintenance
- Buck-a-gallon gas
- Power steering
- Air Conditioning



cover parts and not labor, others pay only a percentage of the repair costs. A warranty is not necessarily worth a thing to you.

Thoroughly examine any car you are thinking of buying. The examination has three separate parts: a walk-around, a drive, and a mechanic's inspection.

Check for paint blisters, under floor mats and in the trunk. A new paint job may indicate a cover-up. Look through the car to determine if the exterior paint color is the same as the trunk, door posts and other spots.

The odometer should indicate about 10,000 to 12,000 miles annual use. Much more than that is excessive. On the other hand, much less than that indicates excessive stop-and-go city driving, which is tough on a car.

Look for service stickers on the door panel edge and the records in the glove compartment to see if they match the odometer.

Other wear points are the driver's seat and pedals. If these are newer than the car, is the model old enough to warrant the replacements? If not, they could indicate hard, rough use of the vehicle.

The tires should show even wear. Depending on the age of the car, all four tires should have been made by the same manufacturer. If the four aren't quadruplets, there is a possibility of bad wheel alignment, balljoint suspension or other problem.

Check the shock absorbers by pushing down on the fenders. More than one bounce indicates that the shocks will have to be replaced. Not expensive, but it could give you some bargaining leverage.

Inspect each of the car's lights.

Check door, trunk, hood, and glove compartment latches, locked and unlocked.

Press the brake pedal. It should have some resistance and not go all the way to the floor.

Your under-the-hood inspection should include a careful search for leaks. Look particularly at connecting points such as hoses. The radiator coolant should not look oily or rusty.

Now start the engine. Are the gauges and lights on the panels operating correctly? Any abnormal sounds? If you hear a rattling sound when you set the emergency brake and press slightly on the accelerator, the problem is the engine bearings. If the car doesn't move forward, the clutch or transmission may be faulty.

Dark gray or blue smoke issuing from the tailpipe can mean the car is an oil burner. In a pre-1972 car, the tailpipe residue should be an evenly distributed, dark-gray color. Pearl gray is normal in a later model car but indicates that the engine of a pre-'72 car is running too hot.

You are ready for the driving test. Check the play in the steering wheel. Is it normal? Does the automatic transmission change gears normally?

If the car has manual transmission, the gears should mesh smoothly. Drive back and forth several feet a few times while listening for any unusual sounds. For example, a clanking might indicate a bad universal joint.

Have someone else drive while you check the wheels for turn-in, turn-out or wobble.

The accelerator should be firm, not wobbly, and should spring back promptly when released. The brake pedal should not sink more than an inch or two, no matter how hard it is pressed; and it should not feel "spongy." The clutch should also be firm but the real test for it must wait until you get on the road.

Next check to make sure all controls, signal lights, buzzers and gauges are in good working order. Turn the steering wheel until you feel pressure first one way then the other; it should not move more than a few inches.

Don't let anyone talk you out of a test drive because the car is guaranteed, or the insurance won't cover you, or any other excuse. If they won't let you drive it, you aren't buying it.

You know how you want the car to accelerate, steer and brake. And of course you know steering response should be quick and tight, but this will vary with the type of car.

If you are not an experienced mechanic, this final step may be the most important—pay a reliable mechanic to check the car out. Isn't it worth $25 or so to find out about an engine crack, a transmisison leak, or bad ball joints?

That's it. Time-consuming? Yes, but worth the trouble.

the gas situation . . .

LOOKING AHEAD

After taking a long look at all the information (from both government and private sources) that is available, we've come up with a possible set of events relating to the coming summer's gasoline shortage . . . and you can believe there WILL be one!

First off though, we don't see much chance of gasoline rationing. Even though government officials say it's "possible," oil imports would have to be slashed to the bone to make it happen. If the oil-exporting countries were to cut back on shipments, because of either internal strife or reaction to the Arab/Israeli Peace Treaty, then we may be in for some supply problems, but rationing would come into effect only if the airlines, railroads, trucking firms, and users of "recreational" gasoline, like boaters and private aircraft operators, don't reduce their use of fuel.

We think it's likely that they will reduce, because the cost of fuel (gasoline, diesel, aviation, and home heating oil) may go up by anywhere from 7¢ to a dime a gallon, probably by Labor Day. This will cause a reduction in commercial and recreational use; airlines and truckers will cut back on low-profit routes, and recreational users won't be travelling as far as usual because of the impending shortages.

And speaking of shortages, we predict that supplies will be tighter, but the situation won't get as bad as the 1973-74 crisis. Regular and premium will still be available, but because unleaded production hasn't kept pace with the number of cars that require it, the unleaded fuel may be in fairly short supply.

And since many of you may be planning to buy a diesel-powered car or truck, remember that diesel fuel comes from oil, too, and its production will be down.

Due to their distance from major refineries and their lack of bulk storage facilities, the Midwest and upper Midwest states will be hit harder than most. You can probably expect some Sunday station closings in all areas of the country, since we have already experienced this phenomenon here in California as this article is being written (April).

We predict you'll see dollar-a-gallon gasoline this fall in many big cities, with unleaded leading the price rise. Other petroleum products like oil and grease probably won't present any supply problems, but with the recent large increase voted by OPEC (Organization of Petroleum Exporting Countries), you can expect their prices to rise too.

The actual OPEC price increase of about $7 a barrel will mean a wholesale increase of around 3¢ a gallon, but the law of supply and demand, coupled with the effect of inflation on middlemen, suppliers and retailers, will add up to the dime a gallon increase that we mentioned earlier.

What all this means to you is that you will again have to correct any bad driving habits and look for every way possible to get the most out of each gallon of gas. You may find yourself looking harder at the new small cars being offered by both the domestic and foreign manufacturers. The 55 mph speed limit, while not terribly popular, is an effective way for automobile owners to save gas, and even if you aren't wholly supportive of it, you've got to admit that a collision at 55 is a lot better than a collision at 75.

All in all, the coming gas shortage won't be earth-shattering, but you'll have to learn to get along on five- to 10-percent less gasoline than you used to. If you can do this, you'll be helping your country as well as yourself.

—SSgt Don Holt

nancy moulton,

by Sgt. R. T. EDWARDS, USA
101 Airborne Division ■ Fort Campbell, KY

mechanic

Specialist Four Nancy Moulton in her "contact" vehicle. Under field conditions the contact truck would search out disabled vehicles and provide on-the-spot repair. Nancy can even do welding here.

Gas and grease and old oil smells mix in the air and attack the nostrils. It's a typical garage. The pneumatic hammer, the air compressor, and other mechanical whiners and thudders sing familiar songs, occasionally drowned out by the blast of the telephone buzzer and the amplified voice of an unseen secretary.

A girl with a blue Honda car comes into the shop. She's got a problem with her disk brakes. She needs the disks turned – an essential process when rebuilding the disk brake system. It's going to cost her, she is told, $140.00 to do all four. She shakes her head. Not in disbelief but in disgust. A mechanic for the United States Army, and an experienced civilian mechanic as well, she could have done the job herself for less than $15.00.

Specialist Four Nancy Moulton, Headquarters Company, 801st Maintenance Battalion, 101st Airborne Division (Air Assault), Fort Campbell, KY is a wheeled vehicle mechanic and one of the first women to work her mechanic's job at 801st Maintenance Battalion.

"It wasn't hard for me," she explains. "I started out working with my dad, and I really got used to this 'man's world' when I worked for Sears as a mechanic before coming into the Army."

Her father started her on small, two-stroke engines when she was about 12 years old and she's been getting into mechanical work ever since.

Grease doesn't bother her; in fact she seems to enjoy the grubbier grimities of the job. But don't let the oil and grease fool you. Moulton plans a drive toward becoming an officer. With her high GT score and her attitude, there's a good chance she'll make it.

Back to the brake job. Moulton explains, "I would have done the work myself but the lathe at the craft shop, the thing I needed to turn the disks, was broken. I could have done that job myself for $15.00 but I had to pay $140.00!"

Moulton emphasizes the use of the craft shop because it is the place where almost anyone can learn backyard mechanical skills that will save a bundle of money.

But before a person gets into the grease, he needs to visit the country of knowledge, that place where the inexperienced becomes a philosopher (the library folks, the library!) to acquire basic information. If you've got a love for a specific car, Moulton recommends you buy a maintenance manual for it. What you don't know in the mechanic business can kill you.

Moulton talks a little about this in connection with her brake job. "There is a certain allowable thickness that the rotors on disk brakes have to be. If,

continued

continued

for example they are too thin, they will heat up, warp, and cause lock-up. Very detrimental to one's health at highway speed."

There is no love's labor lost when Moulton talks about tuneups. "There is really no reason to have to go to a garage for a tuneup. They are so easy to do yourself. When I was working as a civilian mechanic, we would charge a customer around $50.00 for one when the customer could have done it himself for $15.00 plus time and a little bit of knowledge," says Moulton.

What does she think a tuneup should include? "A tuneup is replacing points, plugs, condenser, adjusting the carburetor and checking the valves, if they are adjustable. All of this is part of doing the tuneup. Owning an owner's manual is the best way of learning how to do the tuneup."

Should the owner's manual really be taken seriously? "Yes. The maintenance manual that you get with your car is the best maintenance insurance you can buy. It's a preventive maintenance bible on your machine.

"Any good working machine needs to be taken care of. It needs to be respected. Few people think of a car as a machine. It's just something they get into, fire up, and occasionally put gas and oil in. They're wrong. Anything that turns in the car must be maintained. Preventive maintenance is the best way the owner can insure that the maintenance procedures occur only when they are supposed to. That's respect for machinery," added Moulton.

As far as respect goes, if you wonder what Moulton does to her car, it's, "I drive the thing to death. Why? Because I can fix it. Now that sounds rather opposite of what I just said. I feel that because I can fix it, I'll treat the car right, although not as good as someone who can't work at all on his car and must rely on outside help." Her respect for equipment is genuine.

"Rebuilding an engine is a step-by-step procedure. It should be done carefully, and with all of the specifications on hand. I had a friend who just rebuilt one and the block was warped. When he ran the engine the warpage caused the camshaft to break. There was all that work done for nothing. Spec's have to be carried out to a tee. Otherwise there will be problems with the engine, or for that matter any piece of equipment, either immediately or down the track. It takes patience and professional hands."

Moulton and Sgt (E-5) Gregory Looper, the shop floor foreman, are transferring accessory parts from an inoperative 318 engine to a brand new one. The 318 is used in the M880, a ¾-ton vehicle used tactically.

But there are some things that don't require a professional hand and some of them are common sense objectives of the car's owner. "The slightest piece of dust and dirt entering the lines of an automatic transmission and you've got a transmission that will not shift properly. That's bad news."

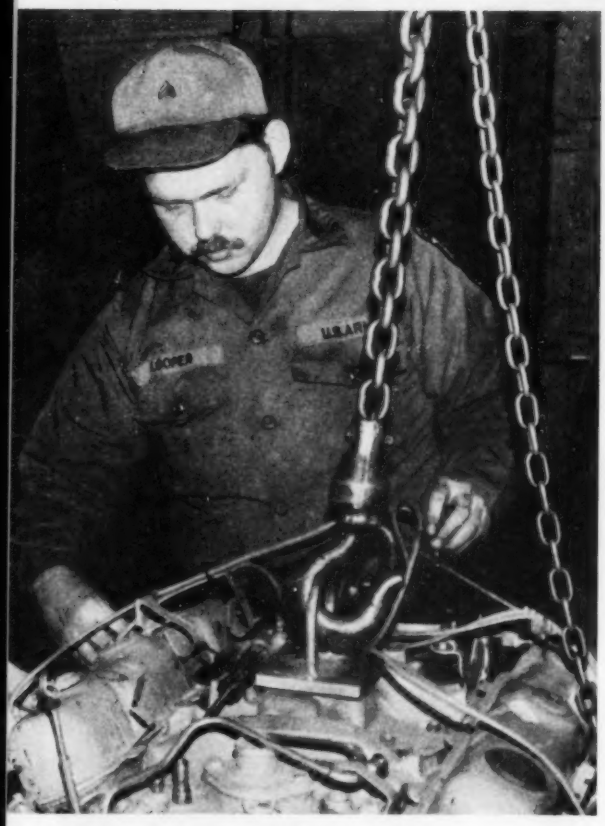
There are other common sense things that will save you money every time one goes to a shop.

"It doesn't take any time or talent to change windshield wipers. Yet people allow themselves to be ripped off for big bucks every time they need them changed. That's dumb.

"What's even dumber is to allow a brake problem to go on and on and on. Then one day when you really need them, it's too late." According to Moulton bad weather will really show if a driver has taken care of the brakes or not. If the brake pressure is not proportional to the specs called for in the owner's manual, any application of brakes on ice and you're going into a ditch. Too much pressure on the rear brakes and the car's coming around to meet the front of the car. It's a bad scene all around.

"Let's hear it for adjusting headlights. Headlights are easy. Bring the car up to within six feet of a wall. Put the beams on low. There is an adjustment screw to the left or right of the light for horizontal adjustments, and one below the light for up-and-down adjustments. The light should be about three feet up on the wall. The craft shop has a chart that will help in giving proper specs on this. But this is a good way of seeing if they are hitting the normal level."

"One sure fire reason why you want to do your own maintenance work is that you know it's done right. Consider the fan belt. You've got an old one and it's squeaking. So you go to the garage. They put a new one on. Do you know if they put it on with the proper tension? No, you don't. If they put it on too tight, you'll be back in about 3 months or 12,000 miles which-

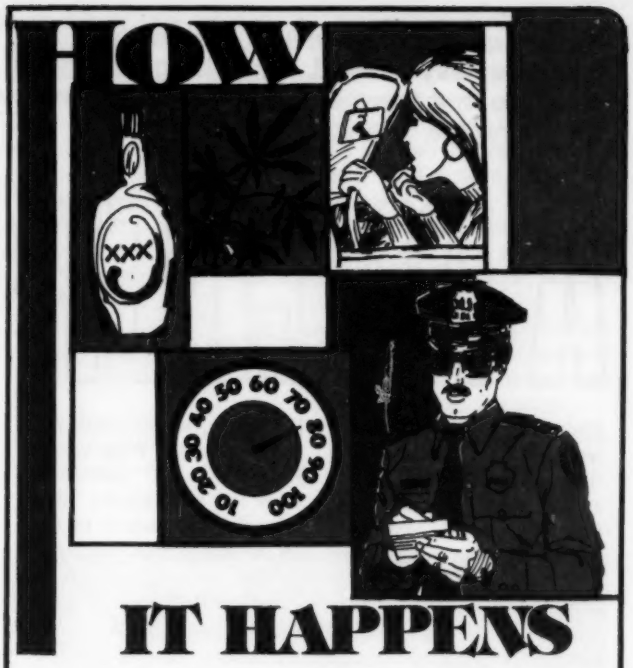


ever comes first. Too loose and you'll be back to get it tightened up – at more cost to you!

"What to do about it? Put it on yourself at the craft shop. It will certainly be worth your while and I believe it will save you money.

"Unlike the human body, a machine does not have the ability to cure its own ills. When ignored, the machine merely gets worse. Most defects are the direct result of poor manufacturing, inadequate maintenance or driver abuse and neglect. Ultimately the driver is responsible for detecting and correcting all three. The next time your car lets you down, shake hands with yourself. You caused it."

You don't have to be a professional mechanic like Moulton. You just have to be concerned about your equipment. You must maintain your vehicle to keep it running. That costs money. It's a lot easier to apply preventive maintenance techniques, do your own tuneups, and work at the craft shop instead of taking money to the garage. That's your choice.



IT HAPPENS

Amn Ted Bearable drives down the freeway in the left lane of traffic on his way to work. He is going 55, and there are cars ahead, behind and to the right of him. A driver three cars ahead suddenly slows his car. The car just behind that slams on the brakes and is hit from behind by the car ahead of Amn Bearable. Ted sees he cannot stop in time and steers over to the shoulder, but then he sees a bridge abutment directly in his way. He tries to steer back into traffic but there is no room. He collides with the crashed car at the point of his right front wheel well. The car turns sideways in the lane before stopping. This position makes it possible for the car following to stop before hitting Amn Bearable.

Q: Did he do the right thing?

1. No. He should not have tried to leave the traffic lane. He might have gone completely off the road.

2. Yes. There was a shoulder to the road, which would have normally enabled him to avoid the accident. The bridge abutment being there was just bad luck, and he would have hit the other car in any case.

A: Would you believe we're not sure? Going off the road onto the shoulder (in this case, a wide, paved one) would seem to be a good idea, but there's that bridge abutment . . . Without it, he might have avoided the accident entirely. But on the other hand, his evasive action might have caused him to lose control of the car and go off the freeway.

However, there's a hidden catch to this situation, which you probably saw. If Ted had been following at the correct distance, he would have been able to stop in plenty of time to avoid even scuffing the chrome on his front bumper.

Oh, and one other thing – seatbelts. Ted had his *on*. In addition to saving him perhaps serious injury, it helped him to remain upright in his seat. That always helps you to steer the car, y'know.

Driving can be fun, driving can be work. It can be easy or hard, it can be gratifying or it can get frustrating. It CAN be safe, too, but there are times and situations where we guarantee that you'll have . . .

A PUCKER FACTOR HIGHER THAN SEVEN

Things don't always go the way we want them. Sometimes the Red Sox can't score, Chris Evert loses 6-1, 6-1, and 6-2, Mario Andretti blows an engine, and John Wayne bites the dust in some of his movies. And even though these occurrences are important to the person involved, and to his or her fans, they really aren't fatal or terribly long-lasting defeats. With an automobile, however, it can be a whole 'nother ball game. Automobile accidents are thoroughly unpleasant at best, and . . . well, you know what they are at worst.

One of the schools of thought about driving safety is predicated upon the "experience is the best teacher" theory, and we agree. Unfortunately, it's hard to get that experience without actually going out and getting into a touchy situation and then trying to avoid it. True, you *do* gain from experience, but we'll all probably admit that it's better to break a pencil in frustration at some written test than to break an arm in a real-world crash-and-burn.

So in the interests of driving safety, we herewith present a series of "What-would-you-do-if . . ." questions. They are all common situations that are a whole lot better to study and discuss in the warm interior of the chief's office than at arm's length peering through a windshield.

And we'll also tell you that if you *do* run across some of these situations, (or any of a thousand others) without having experienced them beforehand, either by this article or actual life, you'll find that your pucker factor may well exceed 7 on the "Prof. Pucker's Mathematically-Accurate Sliding Scale of Impending Doom."

Read the situations, discuss them with your buddies, tell "there I was—" stories, anything . . . so long as you THINK about these and other situations that can suddenly crop up when you least expect them. Remember that even if you don't get every answer the first time through, you still get an A+, just for participating. We've tried to add a little humor to the questions to make them a bit more interesting, but the serious side is still there. Good luck!

1.

You're running the legal speed limit on a four-lane highway in the #2 lane when a car in the #1 lane forces you to the right. Your right-side wheels drop off the pavement and onto the shoulder. The shoulder drops sharply at the edge of the pavement. What should you do?

A. Drive straight ahead and thank the erring driver with a rude gesture.

B. Medium brake, signal, and steer back onto the pavement as soon as possible.

C. Don't brake, ease off accelerator, straddle edge of pavement until car slows and traffic clears, and then turn slowly back onto the pavement.

D. Since you're off the road anyway, make a rest stop.

Answer B could get you in worse trouble than you're already in. The first thing to do is to recover control. This you do as you slow down, but the biggest part of the problem comes when

you try to regain the pavement. When the tire is wrenched back out of the low shoulder and onto the pavement, it takes a big pull on the steering wheel to do it. If you haven't slowed down, the chances are excellent that since you have the wheel turned to the left, you'll continue to the left . . . and on across the lanes into parallel or even opposing traffic.

Answer C is the wisest decision, and the reason for this centers around reduced speed. Of course, it helps to be sure that the lanes next to you are clear of traffic too, but lowering your speed to below 20 mph before attempting to regain the pavement will prevent overcontrol and the resultant crossing of the traffic lanes. We rate this one a light 7.

get away with it, but in this situation, chances are you'd get hung up on the curb and be worse off than bfore.

B is the best answer in this situation. The second car and the compact car will see what's happening and move right and begin to slow down. Then the passing car will have a clear escape lane down the middle. Again, getting your speed down is a good part of the solution. When was the last time you had your brakes checked? We'll give this sticky wicket about an 8.

Invisible Safety Zone article in the March '79 issue to see why. A isn't bad, but it's not the best. It may be that the oncoming driver doesn't realize he's running with high beams. If you flash your brights a couple of times, he may get the picture. So, C is the right answer. Even if he doesn't lower his beams, looking at the right side of the roadway will lessen the effects of the glare of his lights and allow your eyes to handle the situation better.

If you continue to look straight ahead, rate this one an 8. If you avert your eyes to the right side of the roadway, the factor drops to around 5.

continued

2.

You're on a two-lane straightaway going 55 mph. You see three on-coming cars that are about 250 feet ahead. The lead car is a compact. The car at the back of the string pulls out to pass. He hasn't seen the compact and doesn't know he's got *two* cars to pass . . . but he's committed. He's coming right at you. What should you do? Oh, we forgot to tell you . . . you've got a high curb on your right.

A. If you're driving an 18-wheeler, you don't have to do anything . . . it'll all work out OK (for YOU, anyway).

B. Medium brake, veer and squeeze right as far as possible.

C. Lock the brakes.

D. Hard brake, and hard right to go over the curb.

Well, C just isn't gonna cut it. This can put you skidding out of control, and that's something you don't *ever* need.

D isn't the best idea either . . . too risky. If it was a low curb, you might

3.

You're running down a two-lane road at night. A car coming toward you refuses to lower his high beams, and you are momentarily blinded. What now?

A. Keep your beams low, slow down, and look to the right edge of the roadway.

B. Since it's dark and a rude gesture would be wasted, raise your beams and honk until he lowers his beams.

C. Flash your brights on and off, slow down, and look at the right edge of the roadway.

D. If you're driving your 4 × 4 equipped with 27 lights totalling 200,000 candlepower, give him a quick hit with the brights. It'll take his eyes 12 days to get back to normal, and then he still has to repaint his hood to take care of all the paint you burned off.

Even though you'd *like* to do either B or D, they're both wrong. Check *The*

continued

4.

Your car has stalled and left you straddling a railroad crossing. Just like in the movies, there's a train coming. What do you do?

A. Leave the car and run in the direction the train is coming from.

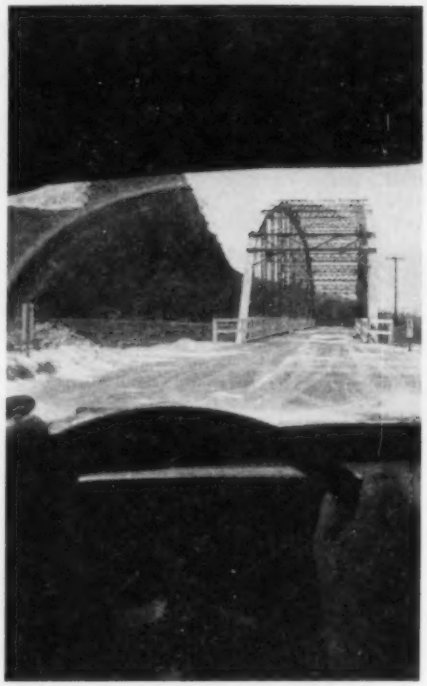
B. Push the car sideways onto the tracks and let the train give you a push-start.

C. Acting with great rapidity, exit the car and push it off the tracks.

D. Quickly exit the car and try to remember if your car insurance is paid up.

We're not even gonna fool with this answer. A is the only way to go. Face it . . . you *are* gonna lose your car. That train will *not* get stopped in time, and you will be better off by running in the direction of the train so you won't get hit by flying debris.

Although you should be quick about it, "make haste slowly." If you panic and run from the car in a hurry, you may get clumsy and catch a foot in the track, or stumble and fall. This one gets a 9.



5.

You're driving 45 mph on a country road. It's cold, and getting colder, but the moisture on the road surface hasn't yet turned to ice. Without warning, you come upon a bridge and there is a thin film of ice covering the entire bridge. What do you do?

A. Hope you've got the 25-cent toll.

B. Ease off accelerator, keep wheels straight, and coast across the bridge.

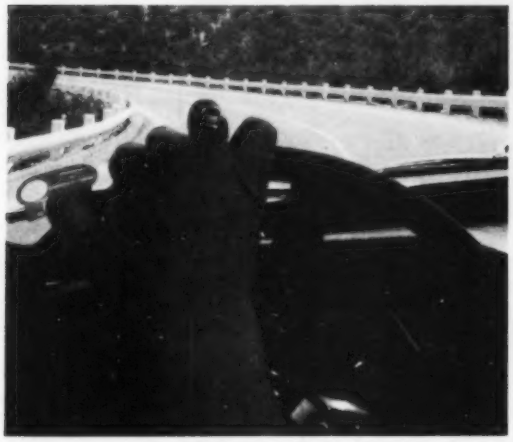
C. Lock the brakes to get stopped before you hit the bridge.

D. Soft brake, hold wheel straight, and steer across.

Did you answer C? Never, never lock the brakes. B is the best answer. You don't want your back wheels either dragging or pulling,

so you don't accelerate or decelerate. Just coast across. If your car has front-wheel drive, the same applies. Yes, we've told you that you correct a skid in a front-wheel drive car by gently accelerating, but in this case you're not in a skid, and your front wheels are pointed straight ahead. D is bad, because most of the time, any braking you do (other than a gentle pumping) on ice will throw you into a skid, and so will acceleration.

A good thing to remember is that water on a bridge will freeze before the water on the road surface. Warmth from the earth keeps the road surface from icing, and cold air circulating around and under the bridge will make its surface freeze faster. This one rates about an 8.



6.

You're bookin' down a two-lane and you're well into a left curve before you realize you've misjudged your speed and the curve isn't banked the way you thought it would be. You're going too fast. What should you do?

A. Turn in the direction the car is skidding.

B. Say "Our Father who art in Heaven . . ."

C. Pump the brakes to increase the rolling friction and steer down the road.

D. Try to remember what Richard Petty would do in a case like this.

At this point, you shouldn't be trying to figure out the relative merits of oversteer vs understeer . . . it's too late. So C would be a good move. Normally in any skid, the rule is to stay off the brakes. In this case, it may not apply. The car's rear end is going to swing out and in order to turn in the direction the car is skidding, you'd have to turn right toward the guard rail.

Maybe your movement wouldn't have to be that sharp but if it requires a hard right, you'd be better off to pump the brakes rapidly. Not a hard brake, but a medium brake, and then control steering to stay on the road. If you hard brake, you'll exaggerate the skid.

Remember that you went into the skid because your tires stopped gripping the road. Reducing your speed and not locking your brakes will increase the rolling friction and get your steering back. This one will give you a medium 9 on the pucker factor scale.

7.

You're driving on the freeway in the #2 lane. Your lighted cigarette falls from your hand and rolls under the seat. What should you do now?

A. Depending on what kind of a cigarette it is, you could stop at a police station and ask them to recover it.

B. Signal, turn right, stop off the freeway, park, and recover the dirty little devil.

C. Slow down, keep your eyes on the road, and reach under the seat.

D. Immediately discharge your on-board Halon fire extinguishing system.

Any time you divert your attention from the road, you're in for trouble. A lighted cigarette can be a dangerous thing, no doubt about it. But B is the best way to insure that it's only your *car* that gets "burned." We give it a 7.

continued

continued

8.

You're in the right lane passing through the business district and going 30 mph. You're going down a hill and, as you approach the traffic signal that has just turned red, you discover your brakes aren't working. You can't stop, and vehicles are already crossing the intersection on their green light. What now?

A. Sound the horn, close your eyes, and pray.

B. Pump brakes, downshift, set parking brake and turn right at the intersection.

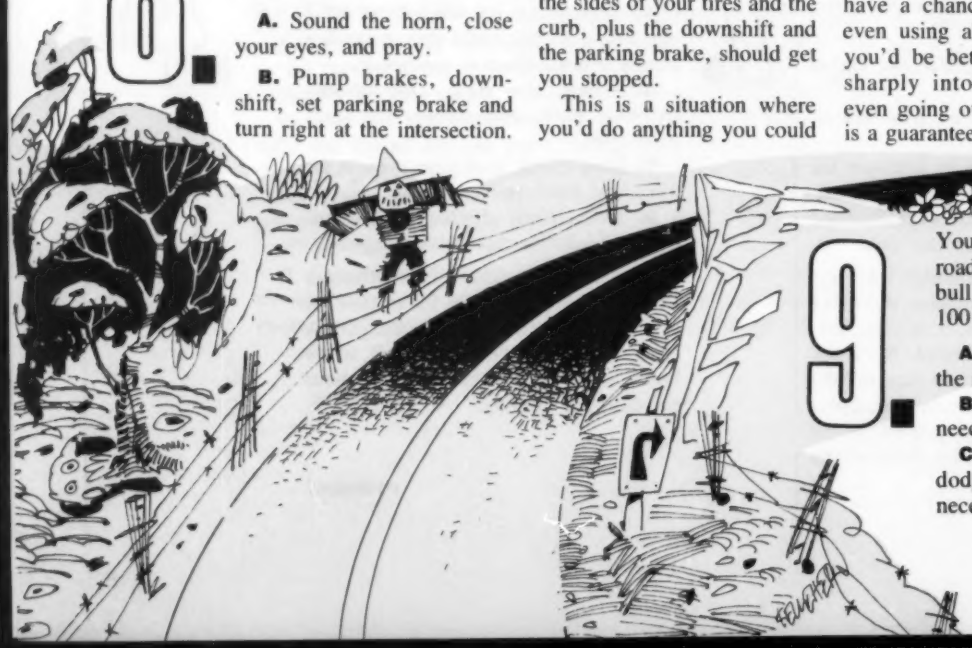
C. Sound horn, pump brakes, downshift, set parking brake, and scrub right-side tires against and into curb.

D. Disregard your passenger's lack of confidence in you as he opens his door and steps out saying, "See ya later."

C is the only way to go. The two friction surfaces, the sides of your tires and the curb, plus the downshift and the parking brake, should get you stopped.

This is a situation where you'd do anything you could to stay out of that intersection. If there were parked cars along the curb, you could have scraped against them. If you see you aren't going to stop, you could throw the car into reverse or even park. This is hard on the car, but at this point, anything is better than getting hit in that intersection.

Also, if you don't think you have a chance of stopping, even using all these things, you'd be better off turning sharply into the curb and even going over it. This one is a guaranteed 10.



9.

You're at 55 mph on a two-lane country road. You round a curve only to find a bull slowly walking across the road not 100 feet away. What should you do?

A. Swerve sharply to avoid hitting the animal.

B. Step on it . . . then you won't need to go to Burger Prince for a year.

C. Hard brake, grasp wheel firmly, dodge the beast if possible, hit it if necessary.

10.

You're driving along a four-lane undivided city street in lane #1 (the inside lane). There is traffic on both sides of you. The engine in your car coughs, the car jerks forward once, and then comes to a dead stop in the lane you're traveling. What do you do now?

A. Check the immediate area for a used car dealer.

B. Get out immediately, raise hood, get away from roadway, and go for help if near enough.

C. Set four-way flashers blinking, get out, raise hood, get to side of road, go for help if near enough.

D. Scream, curse, kick the dashboard, and threaten the car with a .357 magnum to the engine block if it doesn't start NOW!

Tricky question here . . . we'll buy either B or C, depending on whether or not your car is equipped with flashers. The thing to remember here is that you should get out of the car quickly and raise the hood. This warns oncoming motorists that you've got problems. The flashers *should* warn them, but the open hood will leave no doubt as to your predicament.

The decision about staying near the car (on the side of the road, of course) or going for help is up to you. But generally, you only walk for help if you can actually see a nearby service station or police emergency call box. If you don't see either of these, it's usually better to wait around. Help will be there eventually. Oh, yeah, forget about using the CB to call for assistance. Get outta that car as soon as possible. It's terrible to have your CB message interrupted by being hit from behind. This one gets an 8 for the time it takes until your car is safely removed from the traffic flow.

D. Whatever you do, don't lean out the window and yell, "Hey Cow!" Bulls get *extremely* irate when addressed in this manner.

OK, this one has C for the right response. Hard brake, grasp wheel firmly, dodge if possible, hit if necessary. Most of us have an automatic response of trying to dodge the animal, especially if it's a domestic-type cat or dog. If you *can* dodge it, that's the best thing to do, but a sharp swerve could get you into even worse trouble. You could find yourself wrapped around a telephone pole or going for a head-on with a car in the other lane.

You have to make your judgment depending on the size of the animal vs what's on your right. If it's a heavy animal, like a deer, cow, or horse, you may be better off to head for the ditch – unless the ditch is 12 feet deep. Large rocks and utility poles lining the road may affect your decision too.

If you have to hit it, and if you can do it and still keep your wheels going straight down the road, try to quarter the animal. Head for the front or the rear to spin it out of the way rather than hit it straight-on. Hitting it straight-on will tend to lift the animal up, and it could come through the windshield or crush the roof. We rate this one at 9.

BACKfire

LETTERS to the EDITOR

AF KEEPS "ROLLING ALONG"

I was extremely gratified to see that your Nov '78 issue included a long-overdue article explaining, albeit overly-briefly, one of the reasons the Air Force keeps "rolling along": the unsung mechanics in Vehicle Maintenance Shops worldwide.

These guys and gals really deserve a pat on the back. Working with largely antiquated equipment and facilities, an individual vehicle repairman is expected to (and does!) repair hydraulic, electrical, engine (gasoline and diesel), transmission, and air systems on many totally different types of vehicles, each type coming in up to 30-year models. They do this without adequate parts funding, often without protective coveralls (not in the TA, y'know), and in all kinds of weather. They spend up to 12 hours per day up to their eyeballs in grease and engine sludge, and then get chewed out for a dirty uniform when they pick up their mail at the base post office.

A lot of other people on every base have some, most, or all of the same sort of irritants, I know. But the vehicle repairman NEVER gets credit for an outstanding job, the reenlistment bonuses (when they had them) were not compensatory, and command support for them is usually negligible.

Now, DRIVER has officially recognized their efforts, and high time, too. Thanks, from all 60 of us at RAF Upper Heyford, U.K.

Capt James C. Quigley, USAF
Vehicle Maintenance Officer
20th TFW/LGTM
APO New York 09194

Credit where credit is due, we say!

TIPS ON MOTORCYCLING

As a cyclist and a car buff I am doubly interested in your magazine. I've got back issues which I'm always looking at to keep all the tips fresh in my mind. I'd like to pass along a couple of tips I use myself while riding my two-wheeler, both concerning intersections.

When I'm in front of traffic approaching a stop sign or red light, I slow down considerably before I reach the intersection so the guy to my rear will realize I'm slowing to a stop for a reason – in the event he doesn't see the light or sign.

If there is traffic in front of me, the driver in back can see past me that everything is coming to a stop. DON'T take it for granted though. While driving through an intersection with traffic in front, I try to stay as safely to the left and as close to the auto in front as possible – with headlight on – so oncoming autos turning left will see me. I don't like to hang back because 9 times out of 10 the oncoming left turner will try to beat me through the intersection.

Keep up the fantastic work!

SrA Michael J. Goff, USAF
6960 AB Sq
Kelly AFB, TX 78243

Thanks for the tips, Michael!

DIRECTIONAL CONTROL PROBLEMS

In reference to HMC Wallace's letter in January's issue concerning directional control problems with his 1975 Fury Brougham – I have experienced the same type problem (though not as extreme) with my 1974 Fury III.

I had the front-end aligned, bought new tires, went so far as to check drag on the rotors of the front disk brakes and checked for play in the front wheel bearings.

The cure to my problem was two-fold. I did have a warped rotor that had to be turned – this cured a pulsating pull in the steering wheel, which intensified upon application of the brakes. The second part of the cure involved *re*alignment of the front-end *twice*. The second alignment was performed by the same front-end man that had done it originally. The third alignment was performed by a different service facility. At this facility, I once again explained my problem to the technician. He immediately checked the specifications and found that the caster was off. When he adjusted the toe, he started the engine so that all slack was taken up by the power steering unit. In my opinion, the starting of the engine to adjust the toe, coupled with the correct caster angle, was the key to successfully overcoming my problem. I hope this helps Chief Wallace get a handle on his problem.

One other comment – if he bought new *radials* for the front, it would be advisable for him to swap tires front-to-back after a repair is effected, as the radials probably will have developed a wear pattern that may affect steering even after everything else has been corrected.

AT-1 Gary E. Moeller, USN
AIMD IM-1 QA
USS America CV-66
FPO New York 09501

TRIP PLANNING

I am presently in the process of separating from the Air Force at Brooks AFB, Texas and I'm heading for my hometown of Philadelphia.

I have just finished reading your article "Driving Into Spring" (Mar '79 DRIVER). It has a lot of very interesting points which made me stop and think if I'm really ready for that long trip home. By this I mean, are my windshield wipers good, fair or poor? What about my tires? What condition are they in?

After I read your article again, I am planning to go out to my car and do a little research to see if I am ready for my trip. Also, I am planning to reread your article so that I may get some tips on what to look for on my way home.

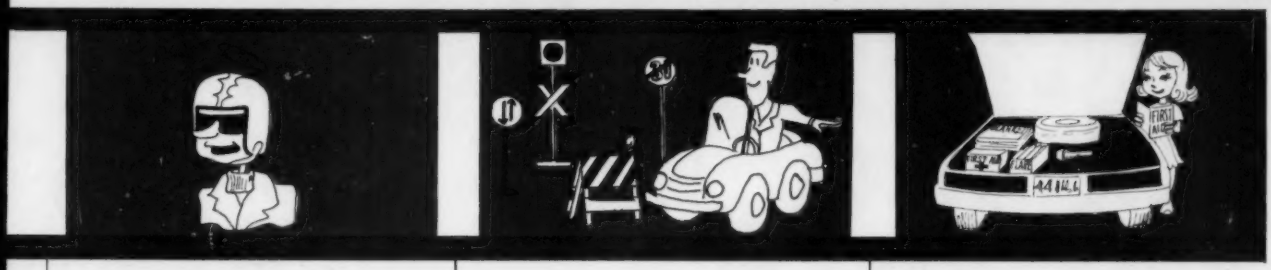
I would like to take this time to thank you and your staff very much for all the great articles that have been printed in your magazine over the past couple of years. Keep up the good work.

A1C Stephen J. Reilly, USAF
PSC Box 1404
Brooks AFB, TX 78235

Thank you for the kind words and for being safety conscious.

INTERNATIONAL ROAD SIGNS

Regarding the article "Achtung" in the Jan '79 issue, a few comments: First, contrary to popular belief, Germany does have a national speed limit. Unless recently changed it is: 50 kmh



(31 mph) on city streets, 100 kmh (62 mph) on rural roads, and 130 kmh (about 80 mph) on a freeway (autobahn), unless otherwise posted higher or lower.

Second, the USA has begun adopting many of the international symbols for various forms of danger, applying them to our yellow diamond-shaped sign instead of using the triangle with point up which is the international shape for "hazard ahead." A yellow diamond sign with red, yellow and green balls (often outlined in black) for "Traffic Light Ahead" has become quite common in many areas of the USA. We have also adopted "Yield" and "One Way Do Not Enter" signs from the international system, adding words to the symbols. Many of our young people have become familiar with the international signs by playing with foreign-made toys, as many toy car sets, building sets, and models of construction machines include one or more road signs.

Third, the international system has adopted at least two signs from us, the octagonal red "Stop" sign and the crossbuck for railroad crossings, usually without lettering on the crossbuck. Also the red, yellow, green traffic signal is standard. Concerning signals, there is no right turn on red provision like we have adopted. If right turns are to move differently from the main signal, a second signal with colored arrows is used, or a traffic island is installed forming a separate intersection with a "Stop" or "Yield" sign.

Fourth, the U.S. Army has published an excellent guidebook on German traffic laws as they apply to civilian and military vehicles, which would apply generally throughout Europe. It is called "Driver's Handbook and Examination Manual for Germany," USAREUR Pam 190-34, USAFE Pam 127-21. When I was stationed in Germany, one was sent to me as part of a "welcome aboard" package. I would suggest two or more copies of this manual be sent to any ship or squadron preparing to deploy to Europe, especially to Germany or its neighbors. My copy came in handy on the USS MILLER during a STANAVFORLANT deployment.

Finally, I realized how much better the symbols are than written signs especially at high speeds even in your own language, when I returned after 18 months in Germany. It was surprising how much effort and time it took to read the signs on the freeway from JFK to NYC, time that a driver's eyes are removed from the road, compared to a quick look at a symbol. The U.S. sign "Trucks over 2 Tons Prohibited in Extreme Left Lane except between 3:00 PM and 6:00 PM" is covered by a symbol with two numbers underneath indicating the effective time. In fact, one can drive safely in Germany knowing only one word in addition to place names, that word being "Umleitung" which means "Detour." Imagine trying to drive in America without knowing any English words!

SKC Dennis J. Hopper, USN
NROTC Unit, VMI
Lexington, VA 24450

Last December I the Germans returned to Freie Fahrt *(meaning free travel or no speed limit) on the Autobahn. The 130 Km/H was an advisory speed limit triggered by the fuel crises in October 1973. There were no pursuits, arrests or fines for drivers who exceeded the advisory limit. Nevertheless, Autobahn speeds did drop because of the advisory limit. The Germans, however, feel that the speed limit had little effect on the nation's consumption of motor fuel. The Transport Minister has proposed an Autobahn speed limit of 100 Km/H (62 mph) in the rain, but that is viewed strictly as a safety measure. Ordinary highways in West Germany have carried a 100 Km/H speed limit since 1972, as a safety precaution.*

EMERGENCY BLANKET

The February issue of DRIVER brought us an article entitled "In Your Trunk With A Load of Junk," which reviewed emergency supplies carried in your car. Though the article was very informative and included mention of a first aid kit, it overlooked one very important piece of equipment – a blanket.

Since shock, in varying degrees, is present in all accident situations, a blanket could keep a victim out of the danger zone. Don't wait to learn by personal experience. I did, but I was lucky. You might not be.

AZ3 Joann Salvemini, USN
AOM NAS Whidbey Island
Oak Harbor, WA 98278

KUDOS

After being an avid reader of DRIVER for years I am thoroughly convinced that it is the best magazine available anywhere. Truly magnificent is the fact that it is solely dedicated to the safety (and help) of its readers. Your entire staff deserves the utmost credit and respect. I truly appreciate the trouble and time you devote to my safety. Being a cycle enthusiast I particularly enjoy your motorcycle-safety articles. This area cannot be stressed too much. Keep up the good work and continue to publish all the cycle information you can.

Yes, I *always* wear my helmet.

TSgt Cecil R. Couch, USAF
8323 Creek Bend
San Antonio, TX 78242

The entire staff thanks you.

ENGINE OIL DRAIN PLUG

In the Feb '79 DRIVER article "The How and Why of Filters," you stated: "The engine oil drain plug is always located under the car, so like we said, you'll have to have the car up in the air."

If this is the rule, I have the exception for it. My 1976 Ford Pinto, 4-cylinder, can easily be changed without crawling under the car due to the fact the drain plug is located on the side of the oil pan.

PV2 Richard G. Bond, USA
C Co 15th Engrs Bn
Ft Lewis, WA 98433

Oops! Sorry about that. We made a mistake.

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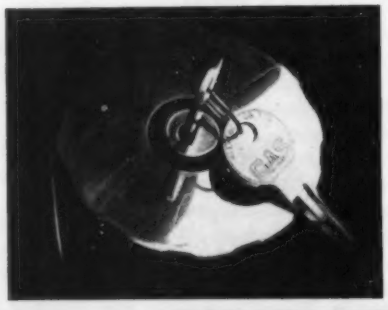
FUEL-SAFE

The rubber hose squad is out again, looking for free tanks of gasoline. You may remember all the siphoning that went on during the gas shortage of 1973. Well, it's happening again. The best way to insure your fellow man will be honest is to take away the temptation—lock up the gas tank. A locking gas cap is a small expense, especially when compared to the present cost of gasoline. That latter expense is due to rise even further (see article on page 17) and the thieves will be even more eager to drain your tank and driver merrily away. The loss of only a few gallons would offset the expense of the locking cap. Think about it.



CONFUSION to all PETROL PUCKER PIRATES